

05/19/99
JC665 U.S. PTO

PATENT
Docket No. 0225-4185

Jc525 U.S. PTO
09/314738
05/19/99

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Sholom S. Rosen Group Art Unit:
Serial No. : To be assigned Examiner:
Filed : May 19, 1999
For : ELECTRONIC TICKET VENDING SYSTEM

UTILITY APPLICATION AND APPLICATION FEE TRANSMITTAL (1.53(b))

ASSISTANT COMMISSIONER FOR PATENTS
Box Patent Application
Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the patent application of

Named Inventor(s) and
Address(es): SHOLOM S. ROSEN, 10 West 86th Street, (Apt. 7-A), New York, New York
10024 U.S.A.

For: ELECTRONIC TICKET VENDING SYSTEM

Enclosed are:

[X] 76 page(s) of specification, 1 page(s) of Abstract, 6 page(s) of claims

[X] 91 sheets of drawing [] formal [X] informal

[X] 4 page(s) of Declaration and Power of Attorney

[] Unsigned
[] Newly Executed
[X] Copy from prior application

[] Deletion of inventors including Signed Statement under 37 C.F.R. § 1.63(d)(2)

[X] Incorporation by Reference: The entire disclosure of the prior application, from which a copy of the combined declaration and power of attorney is supplied herein, is considered as being part of the disclosure of the accompanying application and is incorporated herein by reference.

[] Microfiche Computer Program (Appendix)

- ☐ _____ page(s) of Sequence Listing
- ☐ computer readable disk containing Sequence Listing
- ☐ Statement under 37 C.F.R. § 1.821(f) that computer and paper copies of the Sequence Listing are the same
- ☐ Claim for Priority
- ☐ Certified copy of Priority Document(s)
- ☐ English translation documents
- ☐ Information Disclosure Statement
- ☐ Copy of _____ cited references
- ☐ Copy of PTO-1449 filed in parent application serial No. _____.
- ☐ Preliminary Amendment
- ☒ Return receipt postcard (MPEP 503)
- ☐ Supplemental Declaration
- ☐ Assignment Papers (assignment cover sheet and assignment documents)
- ☐ A check in the amount of \$40.00 for recording the Assignment.
- ☒ Assignment papers filed in parent application Serial No. 08/234,461.
- ☐ Certification of chain of title pursuant to 37 C.F.R. § 3.73(b).
- ☒ This is a ☐ continuation ☒ divisional ☐ continuation-in-part (C-I-P) of prior application serial no. 08/895,395.
- ☐ Cancel in this application original claims of the prior application before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)
- ☐ A Preliminary Amendment is enclosed. (Claims added by this Amendment have been properly numbered consecutively beginning with the number following the highest numbered original claim in the prior application).
- ☒ The status of the parent application is as follows:
- ☐ A Petition For Extension of Time and a Fee therefor has been or is being filed in the parent application to extend the term for action in the parent application until _____.
- ☐ A copy of the Petition for Extension of Time in the co-pending parent application is attached.
- ☒ Patent Application 08/895,395 is pending.

- ☐ Please abandon the parent application at a time while the parent application is pending or at a time when the petition for extension of time in that application is granted and while this application is pending has been granted a filing date, so as to make this application co-pending.
- ☐ Transfer the drawing(s) from the patent application to this application.
- ☒ Amend the specification by inserting before the first line the sentence:
This is a divisional of co-pending application Serial No. 08/895,395 filed July 16, 1997, which is a divisional of application Serial No. 08/730,158 filed October 23, 1996, now U.S. Patent No. 5,703,949, which is a continuation of application Serial No. 08/575,699 filed December 19, 1995, now abandoned, which is a divisional of application Serial No. 08/234,461 filed April 28, 1994, now U.S. Patent No. 5,557,518.

I. CALCULATION OF APPLICATION FEE (For Other Than A Small Entity)

	Number Filed		Number Extra	Rate	Basic Fee
Total Claims	11	-20=	0	x\$18.00	\$0
Independent Claims	3	-3=	0	X\$78.00	\$0
Multiple Dependent Claims					
	<input type="checkbox"/> yes		Additional Fee =	\$270.00	\$0
	<input checked="" type="checkbox"/> no		Add'l Fee =	NONE	

Total: \$ 760.00

- ☐ A statement claiming small entity status is attached or has been filed in the above-identified parent application and its benefit under 37 C.F.R. § 1.28(a) is hereby claimed. Reduced fees under 37 C.F.R. § 1.9(F) (50% of total) paid herewith \$ _____.
- ☒ A check in the amount of \$ 760.00 in payment of the application filing fees is attached.
- ☐ Charge Fee(s) to Deposit Account No. 13-4500. Order No. _____. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.
- ☒ The Assistant Commissioner is hereby authorized to charge any additional fees which may be required for filing this application, or credit any overpayment to Deposit Account No. 13-4500, Order No. 0225-4185. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,

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at least one host processor connected to said communication line that executes input, output, transmission and reception for executing at least one of vending and refunding of an electronic ticket; and

an electronic ticket storage device having an interface that electronically connects to said host processor, where said electronic ticket storage device stores electronic money, an electronic ticket, and a transaction history including transactions of electronic money and electronic tickets, and where said transaction history is updated, by a program stored in said electronic ticket storage device, after a transfer of either electronic money or an electronic ticket;

where in response to an electronic ticket purchase request or an electronic ticket refund request, by at least said host processor or said electronic ticket storage device, at least said electronic ticket or said electronic money is sent from said electronic ticket vending device via said communication line.

OR

An electronic ticket vending system comprising:

electronic ticket vending means for generating an electronic ticket and executing at least one of vending and refunding by exchanging the generated electronic ticket with electronic money;

a communication line connected to said vending means;

at least one terminal means connected to said communication line for executing input, output, transmission and reception for executing at least one of vending and refunding of an electronic ticket; and

electronic ticket storage means having means for electronically connecting said terminal means for storing electronic money, means for storing an electronic ticket, and means for storing a transaction history including transactions of electronic money and electronic tickets, updated by a program stored in said electronic ticket storage means, at a transaction of at least one of electronic money and an electronic ticket;

wherein by a request of one of purchasing and refunding of an electronic ticket by at least one of said terminal means and said electronic ticket storage means, at least one of said electronic ticket and said electronic money is sent from said electronic ticket vending means via said communication line.

B. Claim 1 of the Hiroya Patent and Claim 1 of the Rosen Application
are Directed to the Same Patentable Invention

The chart below compares claim 1 of the Rosen application with claim 1 of the Hiroya Patent. As demonstrated by the following discussion, the Rosen application and the Hiroya Patent claim the same patentable invention even though different terminology is used.

Comparison of Rosen Application Claim 1 with Hiroya Patent Claim 1		
	<u>Rosen Application Claim 1</u>	<u>Hiroya Patent Claim 1</u>
1.	An electronic ticket vending system comprising:	An electronic ticket vending system comprising:
2.	an electronic ticket vending device that generates an electronic ticket and executes at least one of vending and refunding by exchanging the generated electronic ticket with electronic money;	electronic ticket vending means for generating an electronic ticket and executing at least one of vending and refunding by exchanging the generated electronic ticket with electronic money;
3.	a communication line connected to said vending device;	a communication line connected to said vending means;
4.	at least one host processor connected to said communication line that executes input, output, transmission and reception for executing at least one of vending and refunding of an electronic ticket; and	at least one terminal means connected to said communication line for executing input, output, transmission and reception for executing at least one of vending and refunding of an electronic ticket; and
5.	an electronic ticket storage device having an interface that electronically connects to said host processor, where said electronic ticket storage device stores electronic money, an electronic ticket, and a transaction history including transactions of electronic money and electronic tickets, and where said transaction history is updated, by a program stored in said electronic ticket storage device, after a transfer of either electronic money or an electronic ticket;	electronic ticket storage means having means for electronically connecting said terminal means for storing electronic money, means for storing an electronic ticket, and means for storing a transaction history including transactions of electronic money and electronic tickets, updated by a program stored in said electronic ticket storage means, at a transaction of at least one of electronic money and an electronic ticket;
6.	where in response to an electronic ticket purchase request or an electronic ticket refund request, by at least said host processor or said electronic ticket storage device, at least said electronic ticket or said electronic money is sent from said electronic ticket vending device via said communication line.	wherein by a request of one of purchasing and refunding of an electronic ticket by at least one of said terminal means and said electronic ticket storage means, at least one of said electronic ticket and said electronic money is sent from said electronic ticket vending means via said communication line.

1. Electronic Ticket Vending System

The Rosen application is directed to an "electronic ticket vending system", in which an electronic ticket is exchanged for electronic money. The system, which is generally shown in Figure 1, is adapted to perform both vending (when executing the Purchase of Electronic Merchandise protocol of Figures 12A-12B) and refunding (when executing the Dispute Over Electronic Merchandise protocol of Figures 30A-30E). A customer has a customer transaction device which is an electronic processing device having three components, namely, a trusted agent, a money module and a host processor. Figure 3 shows the complete transaction device 122 with the host processor being identified by reference numeral 124. A merchant also has a transaction device including a money module, a trusted agent and a host processor. Electronic tickets are transferred between the trusted agents; electronic money is transferred between the money modules. As disclosed at page 35, lines 10-16, a trusted agent and money module may be fabricated as a single device. The host processor provides various functions such as a human/machine interface that allows the customer or merchant to interact with the system, and a communications device that enables the customer transaction device to communicate with the merchant transaction device. Page 14, line 3 to page 15, line 7.

The Hiroya Patent is also directed to an "electronic ticket vending system". Figure 1 of the Hiroya patent shows an electronic ticket vending & refunding device 1 which exchanges an electronic ticket and electronic money with a terminal device 3 and an electronic ticket storage device 2.

As may be seen by a comparison of the above disclosures, the "electronic ticket vending system" recitations of the Rosen application and the Hiroya Patent are directed to the same concept.

2. Electronic Ticket Vending Device / Electronic Ticket Vending Means

Claim 1 of the Rosen application recites an "electronic ticket vending device". As shown in Figure 5, the electronic ticket vending device comprises a merchant transaction device indicated by reference numeral 198. Also, merchant server 194 provides a merchandise catalogue and merchandise server 194 provides an electronic warehouse of, for example, ticket data. Page 17, lines 25-29. As mentioned above, the merchant transaction device comprises a

host processor, a trusted agent and a money module. The host processor may include, for example, a display screen and a keyboard. Page 14, lines 25-29. The host processor also provides a communication device for wired or wireless communication with the outside world. Page 14, lines 8-13. The money module stores the electronic money in a memory, while the trusted agent creates and also stores electronic tickets. Page 6, line 13 to page 7, line 19. Page 17, lines 5-6. Both the money module and the trusted agent record and maintain a transaction log. Page 16, lines 18-19. Page 40, lines 8-18. Both the money module and trusted agent generate and store cryptographic keys. Page 4, lines 8-18.

The Hiroya Patent claims an "electronic ticket vending means". Figure 2 of the patent shows the components of an electronic ticket vending and refunding device. In particular, the figure shows a CPU 21 and a storage device 11 having a program storage area and a working area. Of course, these elements merely define a processing device. The storage device is also shown as storing electronic money and an encryption key. Figure 2 further shows an input device 19, a display device 18 and a communication device 20. The electronic ticket vending and refunding device of Figure 2 is also shown as connected to a ticket information file 16 and a transaction history file 17.

As may be seen by a comparison of the above disclosures, the "electronic ticket vending device/electronic ticket vending means" recitations of the Rosen application and the Hiroya Patent are directed to the same concept.

3. A Communication Line

Claim 1 of the Rosen application recites a "communication line". Figure 5 of the Rosen application discloses a communication line between a merchant transaction device 198 and a customer transaction device 188. The communication line includes the merchant network 192 and the gateway network 190. The communications may be wired or wireless, broad or narrowband. Page 14, lines 8-13.

Claim 1 of the Hiroya Patent also recites a "communication line". Figure 1 of the Hiroya Patent shows a telephone line 4 connecting the electronic ticket vending and refunding device to the terminal device.

As may be seen by a comparison of the above disclosures, the "communication line" recitations of the Rosen application and the Hiroya Patent are directed to the same concept.

4. Host Processor / Terminal Means

Claim 1 of the Rosen application uses the phrase "host processor connected to said communication line that executes input, output, transmission and reception". The host processor is identified by reference numeral 124 in Figure 3. As stated in the application: "The host processor provides the following functions: Communications 128, Transaction Applications 130, Human/Machine Interface 132, Date/Time 136, and a Message Manager 134." Page 14, lines 3-6. As described in the application at page 14, lines 25-30, the Human/Machine Interface 132 includes, for example, a keyboard, a mouse and a touch screen, and provides for the display of icons, menus, etc. The Human/Machine Interface provides communications with other functions in the trusted agent 120 and money module 6 through the Message Manager 134. The host processor's Communication function 128 supports wired or wireless communications between the transaction device and the outside world. In particular, the Communication function 128 provides the connection between the customer and the merchant transaction devices. Page 14, lines 8-13.

The host processor can execute various transaction applications as illustrated by reference numeral 130 in Figure 3. As stated in the corresponding text: "Transaction Applications 130 may perform a variety of tasks. For example, a transaction application may perform the shopping task by interfacing to a merchant server's catalogue services for browsing activities, choosing the products, and initiating payment and delivery....In short a transaction device 122 contains all the processes to choose, buy and possibly use electronic objects, credentials, and other tickets 8, or the processes to sell the same." Page 14, lines 15-23.

The Rosen application incorporates by reference the disclosure of U.S. Patent No. 5,453,601 (the '601 patent) which describes the preferred money module and the host processing device (i.e., the external system or device) to which it is interfaced. Page 1, lines 28-30. Page 37, lines 6-9. A copy of the '601 patent is annexed as Exhibit B. Examples of such host processing devices are shown in Figure 3 of the '601 patent as including point of sale (POS) terminals, electronic wallets, personal computers/workstations, mainframes and telephones. See also the related text at Col. 9, line 50 to col. 11, line 36.

Claim 1 of the Hiroya Patent uses the phrase "terminal means connected to said communication line for executing input, output, transmission and reception". The terminal device of the Hiroya Patent is illustrated in Figure 3 of the patent as having an input device 22, a display device 23, a communication device 24, a storage device 25, an IC card reader/writer 26, and a CPU 27. As stated in col. 8, lines 40-44: "the terminal device basically provides an interface between a ticket purchaser, the electronic ticket storage device, and the electronic ticket vending and refunding device connected via the communication line."

As may be seen by a comparison of the above disclosures, the "host processor/terminal means" recitations of the Rosen application and the Hiroya Patent are directed to the same concept.

5. Electronic Ticket Storage Device / Electronic Ticket Storage Means

Claim 1 of the Rosen application recites: "an electronic ticket storage device having an interface that electronically connects to said host processor, where said electronic ticket storage device stores electronic money, an electronic ticket, and a transaction history including transactions of electronic money and electronic tickets". The application discloses a customer's trusted agent that has the components shown in Figures 4A and 4B. Page 15, line 11 to page 16, line 12. Page 17, lines 1-11. The trusted agent has an external interface 138 that provides physical communication with the host processor. The trusted agent also has a ticket holder 148 for storing an electronic ticket and a transaction log 162 for recording a ticket transfer. The money module stores electronic money and also has a transaction log for recording an electronic money transfer. In particular, Figure 41 shows a Commit Protocol, where when step 1710 is executed, the customer money module's transaction log is updated. Page 14, lines 6-18. The subject application also discloses that the money module and trusted agent can be fabricated as a single device. Page 35, lines 10-16.

Claim 1 of the Hiroya Patent recites: "an electronic ticket storage means having means for electronically connecting said terminal means for storing electronic money, means for storing an electronic ticket, and means for storing a transaction history including transactions of electronic money and electronic tickets." The patent discloses an electronic ticket storage device in Figure 4. The device has a CPU 38 and a storage device 31 including a program storage area

and a working area which, of course, defines a processing device. The storage device also stores an electronic ticket, electronic money and a transaction history. The device also has an external I/O interface 37.

As may be seen by a comparison of the above disclosures, the "electronic ticket storage device/electronic ticket storage means" recitations of the Rosen application and the Hiroya Patent are directed to the same concept.

6. Purchasing or Refunding Request

Claim 1 of the Rosen application recites: "where in response to an electronic ticket purchase request or an electronic ticket refund request, by at least said host processor or said electronic ticket storage device, at least said electronic ticket or said electronic money is sent from said electronic ticket vending device via said communication line." Figures 12A-12B of the application describe a Purchase of Electronic Merchandise protocol. Page 31, line 1 to page 44, line 13. The customer chooses the electronic merchandise (i.e., the electronic ticket) by way of a buyer transaction application in his host processor device. The identity of the chosen merchandise is sent to the merchant's trusted agent by way of the merchant server. See Figure 12A steps 398, 400, 402, and 406. Also see the corresponding text at page 31, lines 1-15. Subsequently, an electronic ticket is transferred by the Deliver Merchandise subroutine (step 424) shown in detail in Figures 15A-15B.

Figures 30A-30E illustrate a Dispute Over Electronic Merchandise protocol. Page 50, line 29-page 54, line 14. A customer informs a merchant of a dispute over electronic merchandise (i.e., the electronic ticket) by way of a transaction application in his host processor. See steps 1044, 1046 and 1050. In steps 1098 and 1100 of Figure 30D the customer chooses whether he wants electronic money back (i.e., a refund) or whether he wants new electronic merchandise. In the case of a refund, the Pay Dispute subroutine (step 1102) is called. Page 52, line 28 to page 53, line 1. A message requesting a refund is shown in steps 1166 and 1168 of Figure 32, the Pay Dispute subroutine. Step 1174 of Figure 32 shows that electronic money is transferred in response to a refund request. See also Figures 16A-16E for the Money Module Payment subroutine.

The Hiroya Patent recites: "wherein by a request of one of purchasing and refunding of an electronic ticket by at least one of said terminal means and said electronic ticket storage means, at least one of said electronic ticket and said electronic money is sent from said electronic ticket vending means via said communication line." Figure 5 of the Hiroya patent shows an electronic ticket purchasing procedure. Step 250 shows selecting a ticket and sending its identity to the electronic ticket vending and refunding device. Step 390 shows sending the electronic ticket to the electronic ticket storage device.

Figure 12 of the Hiroya Patent shows an electronic ticket refunding procedure. Step 930 as described in the corresponding text beginning at col. 19, line 19, describes the purchaser selecting a refund. Step 970 as described in the text beginning at col. 19, line 53, describes the purchaser identifying the ticket to the electronic ticket vending and refunding device. Step 1110 shows sending the electronic money to the electronic ticket storage device.

As may be seen by a comparison of the above disclosures, the "purchasing or refunding request" recitations of the Rosen application and the Hiroya Patent are directed to the same patentable concept.

Accordingly, as demonstrated by the above comparisons, applicant respectfully submits that claim 1 of the Rosen application and claim 1 of the Hiroya Patent define the same invention.

B. Identification of Claims Corresponding To Proposed Count

1. Claims of the Hiroya Patent

The proposed count recites claim 1 of the Rosen application and claim 1 of the Hiroya Patent as alternatives. Accordingly, since the proposed count includes, as one alternative, claim 1 of the Hiroya patent, claim 1 corresponds exactly to one of the alternatives recited by the proposed count.

Claims 2-18 of the Hiroya Patent also correspond to the proposed count. Applicant notes that the issued claims in the Hiroya Patent were not subject to a restriction requirement. Hence, the presumption is that all of the Hiroya patent claims are directed to one patentable invention. See 37 C.F.R. § 1.141(a).

Dependent claim 2 of the Hiroya Patent recites the electronic ticket vending means as comprising a ticket production means, a ticket transmission and reception means, a money transmission and reception means, money storage means, transaction history storage means, and encryption key storage means. The feature of an electronic ticket production means is either already in claim 1 ("electronic ticket vending means for generating an electronic ticket") or would clearly have been obvious therefrom. The recited transmission and reception means for the ticket and money as well as the recited storage means for both the electronic money and the transaction history are either already recited in claim 1 or obvious therefrom. The use of an encryption key storage means would have been obvious given the conventional use of cryptography in electronic commerce transactions.

Dependent claim 3 of the Hiroya Patent further defines the ticket production means as having a microcomputer programmed to produce a ticket from data indicating the ticket's publication source and price. An electronic commerce device will, of course, use a programmed microcomputer. The recited types of data would have been obvious to include in a ticket.

Dependent claim 4 of the Hiroya Patent further defines the electronic ticket vending means as having features conventionally used in public key cryptography (i.e., a secret key and a public key).

Dependent claim 5 of the Hiroya Patent further defines the electronic ticket storage means as having an I/O interface and a microprocessor. To the extent these features are not already present in claim 1, they are clearly obvious therefrom.

Dependent claims 6, 7 and 8 of the Hiroya Patent, to the extent understood, recite conventional digital signature techniques.

Dependent claim 9 recites a feature of protecting an "item" relating to an electronic ticket, until the ticket is deleted. This feature relates to Hiroya's disclosure of a "deletable flag" in the transaction history file, and merely describes a conventional memory management technique used, for example, in database systems.

Dependent claim 10 of the Hiroya Patent recites the feature of deleting the electronic ticket being refunded after receiving the electronic money refund payment. It would have been obvious to delete a refunded item after receiving payment.

Dependent claim 11 of the Hiroya Patent recites that the electronic ticket storage means includes an invalid flag used during a refund, and a means for deleting the electronic ticket after completion of the transfer. These features would have been obvious to include in an electronic refund transaction.

Independent claim 12 of the Hiroya Patent recites the steps for performing an electronic ticket vending method in a system like that of claim 1. The first two steps of claim 12 ("sending a purchased electronic ticket to said electronic ticket transmission and reception means from at least one of the terminals" and "sending a sending request for the purchasing cost to the purchase desire terminal, when said electronic ticket can be vended from said electronic ticket transmission and reception means"), to the extent understood, appear merely to recite the obvious preliminary steps of the purchaser selecting a particular ticket to be purchased and the vendor asking to be paid the price of the ticket. The remaining steps are merely those of sending the electronic money, sending the electronic ticket, and receiving and storing the electronic ticket. The method of claim 12 is not patentably distinct from the proposed count.

Dependent claim 13 of the Hiroya Patent further recites the steps to perform an electronic ticket refund method using a system like that of claim 1. The recited steps are essentially those of sending a refunding request, requesting sending of an electronic ticket to be refunded, receiving and confirming the validity of the electronic ticket that is sent, and then sending the electronic money being refunded to the electronic ticket storage means via the terminal. These are merely obvious steps given the refund functionality of the system defined by the proposed count.

Dependent claims 15, 16, 17 and 18 of the Hiroya Patent (taken out of sequence because of their ultimate dependence from claim 12), merely recite the steps of sending and receiving the electronic money and the electronic ticket by the electronic ticket transmission and reception means and the electronic ticket storage means. Furthermore, these claims, to the extent understood, appear to recite the steps of recording the electronic ticket and electronic money transfers in the transaction history, which is obvious given the proposed count.

Independent claim 14 of the Hiroya Patent recites the steps of performing an electronic ticket refunding method using a system like that of claim 1. The refunding steps of claim 14 are similar to those recited in claim 13. The steps are obvious given the refund functionality defined by the count.

2. Claims of the Rosen Application

The proposed count recites claim 1 of the Rosen application and claim 1 of the Hiroya Patent as alternatives. Accordingly, since the proposed count includes, as one of the alternatives, claim 1 of the Rosen application, claim 1 corresponds exactly to one of the alternatives recited by the proposed count.

Claims 2-11 of the Rosen application also correspond to the proposed count.

Dependent claim 2 of the Rosen application corresponds substantially to claims 2 and 3 of the Hiroya Patent. Application claim 2 relates to producing an electronic ticket from ticket publication source data and ticket price data. This feature would have been obvious in view of the proposed count which recites “generating an electronic ticket”. The remaining features would also have been obvious to include in an electronic ticket vending device for reasons similar to those given regarding claims 2 and 3 of the Hiroya Patent.

Dependent claim 3 of the Rosen application corresponds substantially to claim 4 of the Hiroya Patent. Claim 3 relates to the use of public key cryptography in the electronic ticket vending system. The use of different key pairs for different merchants would have been obvious given conventional asymmetric cryptographic techniques. Therefore, claim 3 should be designated to correspond to the proposed count.

Dependent claim 4 of the Rosen application corresponds substantially to claim 5 of the Hiroya Patent and should be designated to correspond to the proposed count for similar reasons.

Dependent claim 5 of the Rosen application relates to storing an electronic signature in the electronic ticket storage device. The use of digital signatures was conventional in the art. Accordingly, claim 5 should be designated to correspond to the proposed count.

Independent claim 6 of the Rosen application corresponds substantially to claim 12 of the Hiroya patent and should be designated to correspond to the count for similar reasons.

Dependent claims 7-10 of the Rosen application correspond substantially to claims 15-18 of the Hiroya patent and should be designated to correspond to the count for similar reasons.

Independent claim 11 of the Rosen application corresponds substantially to claim 1 of the Hiroya patent and should be designated to correspond to the count for similar reasons.

C. Support in the Present Application and Benefit Applications for Applicant's Claims 1-11

Applicant's claims are self supporting original claims of this application. Moreover, as described below, the claims are fully supported by the specification of this Rosen application as well as the benefit Rosen applications. This Rosen application is a Rule 53(b) divisional application of U.S. Serial No. 08/895,395 filed July 16, 1997 which is a Rule 60 divisional application of U.S. Serial No. 08/730,158 filed October 23, 1996, which is a continuation of U.S. Serial No. 08/575,699 filed December 9, 1995, which is a divisional application of U.S. Serial No. 08/234,461 filed April 28, 1994 now issued as U.S. Patent No. 5,557,518 (the '518 patent). For convenience, reference below is made to the '518 Rosen patent as well as the present Rosen application. A copy of the '518 patent is annexed as Exhibit C. The figure numbering is the same for the '518 patent and the Rosen application.

1. Claim 1

(a) "Electronic Ticket Vending System"

An "electronic ticket vending system" is shown in Fig. 1. As stated in the specification: "Referring to FIG. 1, there is shown the basic interaction between system components during an anonymous payment transaction. To achieve the secure exchange of payment for electronic merchandise when buyer and seller are transacting electronically, the present invention introduces trusted agents 2, 4 for both the customer and merchant. A trusted agent is a combination of hardware and software components. It is tamperproof and contains secure protocols which cooperate with a money module 6 to synchronize secure payment to delivery." Page 6, lines 13-19 (col. 4, lines 4-13 of the '518 patent). As further stated in the specification:

"Electronic merchandise is any goods that can be represented in electronic form, and in the preferred embodiment described herein consists of either a ticket or an encrypted electronic object (EO) and its associated decryption ticket." Page 7, lines 13-15 (col. 4, lines 41-44 of the '518 patent).

(b) "Electronic Ticket Vending Device"

Claim 1 of the Rosen application recites: "an electronic ticket vending device that generates an electronic ticket and executes at least one of vending and refunding by exchanging the generated electronic ticket with electronic money." The claimed "electronic ticket vending device" is supported by the merchant transaction device 198 shown in Figure 5 and also shown in Figure 3 as comprising host processor 124, trusted agent 120, and money module 6. Page 13, line 26 to page 15, line 7 (col. 7, line 65 to col. 8, line 53 of the '518 patent). Support for the recitation of the electronic ticket vending device is also found in the merchant server 194 shown in Figure 5 which provides a "merchandise catalogue" as discussed at page 17, lines 28-29 (col. 10, lines 23-25 of the '518 patent). The specification further discloses a merchandise server 196 which constitutes an electronic warehouse. Page 17, line 30 (col. 10, lines 26-27 of the '518 patent).

The claim recites that the electronic ticket vending device "generates an electronic ticket". Support for this phrase is found in Figure 4A which shows Ticket Holder 48. As discussed at page 17, lines 5-6 (col. 9, lines 60-61 in the '518 patent) a ticket is generated by the trusted agent's Ticket Holder 148. For example, see step 468 "Create Ticket" in Figure 15A and the corresponding text at page 32, line 30 (col. 18, lines 43-47 in the '518 patent). Examples of electronic tickets (such as an event ticket) are shown in Figure 2 and described in the corresponding text beginning at page 7, line 13 (col. 4, line 40 of the '518 patent).

The claim also recites that the electronic ticket vending device "executes at least one of vending and refunding by exchanging the generated electronic ticket with electronic money." Support for the vending function is shown generally in Figure 1. More particularly, Figures 12A-12B illustrate a Purchase of Electronic Merchandise protocol. Page 31, line 1 to page 44, line 13 (col. 17, line 41 to col. 24, line 63 of the '518 patent). Step 424 "Deliver merchandise" and step 430 "Money Module Payment" relate to the transfer of an electronic ticket and

electronic money, respectively. The subroutines corresponding to these steps are detailed in Figures 15A-15B and Figures 16A-16E, respectively.

Support for the refunding function is shown in Figures 30A-30E which sets forth a Dispute Over Electronic Merchandise protocol. Page 50, line 29 to page 54, line 14 (col. 28, line 39 to col. 30, line 42). In step 1098 the customer chooses if he wants electronic money back (i.e., a refund) or new merchandise. Figure 32, the Pay Dispute protocol, illustrates part of the refund mechanism. Steps 1166-1174.

(c) "Communication Line"

A "communication line connected to said vending device" is supported, for example, by Figure 5 which shows exemplary communication networks connecting the merchant and customer. See, for example, merchant network 192 and gateway network 190. Page 15, lines 15-26.

(d) "Host Processor"

Claim 1 recites: "at least one host processor connected to said communication line that executes input, output, transmission and reception for executing at least one of vending and refunding of an electronic ticket." Support for this "host processor" recitation was described previously in Section B.4. See also the '518 patent at col. 8, lines 1-53.

(e) "Electronic Ticket Storage Device"

Claim 1 recites: "an electronic ticket storage device having an interface that electronically connects to said host processor, where said electronic ticket storage device stores electronic money, an electronic ticket, and a transaction history including transactions of electronic money and electronic tickets, and where said transaction history is updated, by a program stored in said electronic ticket storage device, after a transfer of either electronic money or an electronic ticket." Support for an "electronic ticket storage device" is found in Figure 3 which shows trusted agent 120 and money module 6 forming part of the customer transaction device. As disclosed in the application, "instead of the trusted agent 120 and money module 6 being embodied as discrete tamper-proof components, they may be fabricated as one tamper-proof module." Page 35, lines 10-16 (col. 4, lines 14-16 of the '518 patent).

As recited in the claim, the electronic ticket storage device has "an interface that electronically connects to said host processor." Support for this phrase is found in Figure 4A which shows an "External Interface 138". As stated in the text, "An External Interface function 138 provides physical communication with the host processor 124...". Page 15, lines 20-21 (col. 9, lines 1-2 of the '518 patent).

As also recited, the electronic ticket storage device "stores electronic money." This phrase is supported by the disclosed money modules. Electronic money is stored in the money module 6 of Figure 3. As stated in the text: "The money modules contemplated herein are tamper-proof devices, capable of storing and transferring electronic money." Page 6, lines 1-2 (col. 4, lines 14-16 of the '518 patent). The preferred money modules of the present invention are disclosed in U.S. Patent No. 5,453,601 which is incorporated by reference. Page 1, lines 28-30; page 6, lines 25-27; page 37, lines 6-7; page 54, lines 18-30. (Col. 1, lines 33-36; col. 4, lines 21-24; col. 21, lines 8-10; col. 30, lines 45-63 of the '518 patent).

The claim also recites that the electronic ticket storage device "stores an electronic ticket." This phrase is supported by the disclosed trusted agents. Electronic tickets are stored in trusted agent 120 of Figure 3. Tickets are stored by "Ticket Holder 148" of Figure 4A. Page 17, lines 5-6 (col. 9, lines 60-61 of the '518 patent).

The claim recites that the electronic ticket storage device "stores a transaction history" (i.e., a transaction log) for both electronic money and electronic ticket transactions. This phrase is supported by Figure 4B which shows that a trusted agent has a Tran Log 162. As stated in the text: "A Tran Log function maintains a log of trusted agent transactions. Both CTAs 2 [customer trusted agents] and MTAs 4 [merchant trusted agents] maintain a transaction log which stores the following information: transaction type (e.g., ticket type); a pre-transaction ticket image; a post-transaction ticket image...". Page 16, lines 5-11 (col. 9, lines 22-30 of the '518 patent). Examples of ticket image information are shown in Figure 2.

Money modules also maintain a transaction log. Figure 41 illustrates a Commit Protocol for money modules. Step 1710, "Update Tran Log", updates the customer money module's transaction log with respect to the electronic money transfer. Page 40, lines 9-18 describes the content of an exemplary transaction log when recording a completed transfer of electronic

money. U.S. Patent 5,453,601, incorporated by reference in both the present application and the '518 patent, similarly shows exemplary transaction log content at col. 12, lines 14-33.

Claim 1 also recites: "where in response to an electronic ticket purchase request or an electronic ticket refund request, by at least said host processor or said electronic ticket storage device, at least said electronic ticket or said electronic money is sent from said electronic ticket vending device via said communication line." Support for this phrase has been described previously in Section B.6. With regard to purchasing, Figures 12A-12B illustrate a Purchase of Electronic Merchandise protocol. With regard to refunding, Figures 30A-30E illustrate a Dispute Over Electronic Merchandise protocol resulting in a customer refund.

2. Claim 2

Claim 2 is directed to producing the electronic ticket from at least "data indicating a ticket publication source and data indicating the price of a ticket." Support for this phrase is found in Figure 2 which shows the data content of exemplary electronic tickets. Identifier 10 includes a merchant identifier 22. Page 9, lines 19-22 (col. 5, lines 44-48 of the '518 patent). Also, an event ticket includes purchase price data 96. Page 11, lines 4-6 (col. 6, lines 33-26 of the '518 patent). As further support, the execution of a protocol for ticket creation is shown in Figure 12A, steps 412-424 and Figure 15A, steps 464-468. Page 32, lines 21-30 (col. 18, lines 35-47 of the '518 patent).

The claim also recites "an interface for transmission reception of electronic money, an interface for transmission reception of an electronic ticket." For supporting disclosure, see, for example, "Communications 128" in Figure 3 and "External Interface 138" in Figure 4A. As further support see also, for example, "External Interface 30" in Figure 4 of U.S. Patent No. 5,453,601, which is incorporated by reference.

The claim also recites that the electronic ticket vending device "stores an encryption key." For supporting disclosure, see, for example, symmetric key and public key 152 in Figure 4A. Page 17, lines 3-8 (col. 9, lines 56-63 of the '518 patent).

Claim 2 also recites the storage of electronic money and a transaction history. Disclosure supporting this recitation has been previously discussed in Section B.5.

3. Claim 3

Claim 3 recites storing a “secret key of an asymmetric encryption algorithm which varies with each merchant and a public key forming a counterpart to said secret key.” Support for the generation of public and secret keys has been previously given for applicant’s claim 2. Further supporting claim 3 is the disclosure relating to the electronic certificate stored in the merchant’s trusted agent. A public key is incorporated into each certificate as set forth, for example, at page 20, line 12 to page 21, line 12 (col. 11, line 44 to col. 12, line 12 of the ‘518 patent).

4. Claim 4

Claim 4 relates to “controlling transmission and reception of an electronic ticket and electronic money, and storage of said transaction history.” Support for these features has been previously given in Section B.5.

5. Claim 5

Claim 5 recites that the electronic ticket storage device “stores an electronic signature which is produced by digitally signing ticket data.” Support for digitally signing tickets is described at page 12, line 27 to page 13, line 4 (col. 7, lines 30-41 of the ‘518 patent).

6. Claim 6

Claim 6 describes a method for vending an electronic ticket. Support for the steps of claim 6 have been previously set forth in the discussion of the system claims. For example, support for “sending a request to purchase an electronic ticket” is shown in steps 398-406 of Figure 12A (Purchase of Electronic Merchandise protocol). Support for sending a “request for ticket payment” is described, for example, on page 39, lines 15-21 (col. 22, lines 28-36 of the ‘518 patent). Support for “sending electronic money” and “sending said electronic ticket” is described, for example, on page 42, lines 16-22 (col. 23, lines 52-61 of the ‘518 patent).

7. Claim 7

Claims 7 recites steps occurring at the electronic ticket vending device during an electronic ticket purchase. The steps are (1) receiving the electronic money, (2) recording the receiving of the electronic money, (3) sending the electronic ticket and (4) recording the sending of the electronic ticket. Support for each of these steps has been previously set forth in the discussion of the system claims.

8. Claim 8

Claim 8 recites steps occurring at the electronic ticket vending device during an electronic ticket refund. The steps are (1) receiving the electronic ticket, (2) recording the receiving of the electronic ticket, (3) sending the electronic money and (4) recording the sending of the electronic money. Support for each of these steps has been previously set forth in the discussion of the system claims.

9. Claim 9

Claim 9 recites steps occurring at the electronic ticket storage device during an electronic ticket purchase. The steps are (1) sending the electronic money, (2) recording the sending of electronic money, (3) receiving the electronic ticket, and (4) recording the receiving of the electronic ticket. Support for each of these steps has been previously set forth in the discussion of the system claims.

10. Claim 10

Claim 10 recites steps occurring at the electronic ticket storage device during an electronic ticket refund. The steps are (1) sending the electronic ticket, (2) recording the sending of the electronic ticket, (3) receiving the electronic money, and (4) recording the receiving of the electronic money. Support for each of these steps has been previously set forth in the discussion of the system claims.

11. Claim 11

Claim 11 recites an electronic ticket vending system. The supporting disclosure for this claim is the same as that previously given for applicant's claim 1.

D. The Requirements of 35 U.S.C. §135(b) Have Been Met

Applicant Rosen has filed claims 1-11 on May 19, 1999, within one year of the issue date of the Hiroya Patent (i.e., May 19, 1998) in compliance with 35 U.S.C. §135(b). See MPEP § 2307 citing Switzer v. Sockman, 333 F.2d 935, 142 USPQ 226 (CCPA 1964).

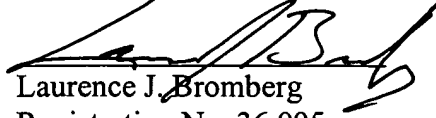
E. Applicant Rosen Should Be Declared the Senior Party in the Proposed Interference

Applicant's present application is a divisional application under 37 C.F.R. §1.53(b) of currently pending U.S. Serial No. 08/895,395 filed July 16, 1997, which is a 37 C.F.R. §1.60 divisional application of U.S. Serial No. 08/730,158 filed October 23, 1996 (now U.S. Patent No. 5,703, 949), which is a continuation of U.S. Serial No. 08/575,699 filed December 19, 1995, which is a divisional application of U.S. Serial No. 08/234,461 filed April 28, 1994 (now U.S. Patent No. 5,557,518). As shown above, the claims in this Rosen application are also supported by the disclosures of the above-identified benefit Rosen applications. Therefore, the effective filing date to which the Rosen application is entitled is April 28, 1994. The Hiroya Patent was issued from U.S. Serial No. 558,741 filed November 16, 1995 and claims priority to Japanese Application No. 6-284623 filed November 18, 1994, almost seven months after Rosen's effective filing date. Based upon the foregoing filing dates, the applicant Rosen should be named as the Senior Party in the proposed interference.

In view of the above, applicant Rosen respectfully requests that (1) an interference be declared between the subject Rosen application and the Hiroya Patent with the Count being the Count proposed herein, and that (2) applicant Rosen be named Senior Party in the interference.

If any fee is required in connection with the filing of this Request, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 13-4500. Order No. 0225-4185.

Dated: May 19, 1999

Respectfully submitted,
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